AMENDMENTS TO THE DRAWINGS

Provided herewith is a replacement sheet of drawings corresponding to Figs. 1A-1C provided to add numerical references so as to render the drawings consistent with the specification text.

ATTACHMENTS

Provided as part of this amendment is a declaration of John E. Madocks submitted under 37 CFR 1.132.

REMARKS

Applicant notes with appreciation the courtesy extended to Applicant's representative by Examiner Band through the telephonic interview of August 12, 2010. Based on that discussion, and the interview summary embodied in Paper No. 20100812, the objections to the specification detailed in Paper No. 20100602, page 2, section 1, are believed to have been overcome. It is noted that additional consideration as to new matter objections is required with respect to the paragraph beginning on line 4 of page 7 to which Applicant hereby proposes the additional phase of "at surface 208". Support for this and the previous specification amendments is provided below. By way of this amendment, claims 1, 5 and 21 have been amended so as to leave claims 1-5, 9-11, 13, 14 and 21-29 pending in the application. Support for the amendments to independent claims 1 and 21 is found *inter alia* in Figs. 1A and 1B of the application as filed. Support for the amendment that the electrons are confined electrostatically and with mirror magnetic confinement is found at page 4, lines 30-31. The amendments to claim 5 are formalistic in nature. As such, it is submitted that no new matter has been added to the application by way of these claim amendments.

With respect to the specification paragraph beginning at page 7, line 4, Applicant respectfully submits that no new matter is submitted by clarifying the nature of the magnetic field strength ratio at the substrate relative to the cathode. With reference to Fig. 1A, on purely geometric terms, the linear extent of the magnetic field along substrate surface 208 in the region 202 is approximately one fifth of the linear extent of the field strength of the linear extent of the

field at cathode surface 3. As no other source of magnetic field is present, the ratio of field strength at the substrate surface relative to the cathode (second) surface is depicted graphically in this figure and similarly articulated in the specification text as filed. As such, it is submitted that the previous amendments to the paragraph beginning on page 7, line 4 of the specification as well as those provided herewith do not constitute new matter. Further support for this position is provided by the attached declaration provided under 37 CFR 1.132 by John E. Madocks. As such, withdrawal of the objection as to amendments to the specification as constituting new matter is hereby requested.

Claim 5 was previously rejected under 35 U.S.C. §112, second paragraph, as a result of ambiguity associated with "said surface". The above amendment to claim 5 is believed to overcome this rejection and withdrawal thereof is hereby requested.

Currently, claims 1-5, 9-11, 14, 21-27 and 29 stand rejected under 35 U.S.C. §103(a) over Tateishi et al. (US 4,853,102). Lastly, claims 13 and 28 stand rejected under 35 U.S.C. §103(a) over Tateishi and further in view of Kashiwatani et al. (JP 09241406). Reconsideration and withdrawal of these rejections are requested on the basis of the above amendments, the following remarks, and the attached declaration.

Remarks Directed to Rejection of Claims 1-5, 9-11, 14, 21-27 and 29 under 35 U.S.C. §103(a) over Tateishi et al.

With respect to independent claims 1 and 21, Tateishi with respect to Figs. 8 and 10 in particular is cited as teaching the claimed elements. Tateishi et al. with respect to Fig. 10 is suggested to provide a magnetic field strength ratio of greater than 2 to 1 even though specific teaching as to this ratio is not found in Tateishi et al. (Paper No. 20100602, section 6, paragraph spanning pages 4-5). Patentable consideration appears not to have been given to this claim

recitation as to magnetic field ratio absent a showing that the parameter is a result-effective variable.

Pending independent claims 1 and 21 have been amended to explicitly recite that the nature of electron confinement in the plasma region is a result of electrostatics and mirror magnetic confinement with support for this amendment being found in the specification as filed at page 4, lines 30-31. To further emphasize the differences between the present invention and the disclosure of Tateishi et al., the pending claims now recite the inclusion of a permanent magnet with a "north pole [oriented] proximal to said substrate relative to a south pole". It is respectfully submitted that in addition to these two recited attributes of the pending claims, Tateishi et al. is also deficient in failing to provide a teaching commensurate in scope with claim language that the "magnetic field having a portion passing through said substrate that is at least two times stronger at the first surface than at said second surface [cathode]". The following remarks with respect to these claimed attributes are further bolstered by the attached declaration.

Contrary to the pending claims, Tateishi et al. with respect to Fig. 10 is submitted to lack magnetic field lines passing through the substrate into the top electrode [cathode] and instead describes a cusp field generated in the center of the gap region. Additionally, the arrangement of Tateishi et al. fails to afford a magnetic mirror confinement. As bolstered by the attached declaration, the magnetic mirror and the electron confinement it provides constitute well-established terms of art. Additionally, with respect to Fig. 10 of Tateishi et al., it is noted that the annular permanent magnets are not provided under the substrate in such a way as to provide an axial magnetic field relative to the plasma field. This is graphically illustrated by comparison of field lines of pending application Fig. 1A relative to Fig. 10 of Tateishi et al. Additionally, there is no contemplation, motivation, or teaching found in Tateishi et al. for

placement of magnets according to Tateishi et al. in a place other than as an annulus underneath the substrate to form a surrounding ring of magnetic field lines that afford weak central field lines. Additionally, with respect to Fig. 10 of Tateishi et al., the arrows indicating the magnetic field would suggest to one of ordinary skill in the art an opposite configuration from a magnetic mirror source in that the field lines are opening toward the substrate and as such are weaker near the substrate relative to the electrode. The additional teachings found in Tateishi et al. fail to bolster the above deficiencies of this reference in that neither the position of the magnet relative to the substrate, the ratio of field strengths between the substrate and cathode, nor magnetic mirror confinement in the plasma region are detailed therein. As such, it is submitted that the claimed invention detailed in independent claims 1 and 21 is not obvious over Tateishi et al.

The outstanding rejection is submitted to be defective in failing to find within the single reference of Tateishi et al. a showing of suggestion or motivation to modify Tateishi et al. commensurate with the claimed invention as to type and position of magnetic placement, as well as provision of magnetic mirror confinement. The outstanding rejection is now submitted to be on its face contrary to the holdings of *In re Kotzab*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000).

In re Kotzab (affirmed post-*KSR*) holds that:

> Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *See B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996).

and further cautions against the very hindsight submitted to be at the heart of this rejection.

> In rejecting a patent's claims, the PTO "fell into the hindsight trap." The idea behind a limitation in the claims – to use a "single temperature sensor to control a plurality of flow control valves" – was a "technologically simple concept." With the concept in mind, the PTO found statements in the prior art that "in the abstract

> appeared to suggest the limitation," but it made no finding of a specific understanding within the knowledge of a skilled artisan that would motive one without no knowledge of the invention to make the limitation. The PTO's finding that a single reference taught the "single sensor" by stating that a single "system" could control multiple valves lacked substantial evidentiary support because the reference did not use "single system" as synonymous with "single sensor."
>
> A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. ... Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." *Id.* (quoting *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

The law is clear that the mere conclusionary statement standing alone that Tateishi et al. motivates the claimed magnetic filed strength ratio as claimed is insufficient to support an obviousness rejection. This statement standing alone is NOT evidence needed to support a *prima facie* case of obviousness. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 56 USPQ2d 1456 (Fed. Cir. 2000).

The criticality of the field strength ratio as recited in the pending claims is submitted to be a result effective variable consistent with citation to MPEP 2144.05 found in the outstanding Office Action. The specification at page 7, lines 9-15, states:

> A weaker ratio than 2:1 results in too few electrons being reflected by the magnetic mirror, and a low pressure plasma cannot be sustained.
>
> This embodiment confines sufficient electrons such that a low pressure plasma is sustained. In trials of many configurations, the ratio of at least 2:1 between the strong field over the substrate and the weaker field in the gap is important. As the ratio increases, the confinement improves.

As such, this claim recitation is submitted to be entitled to patentable weight.

With independent claims 1 and 21 now believed to be in allowable form and patentably distinct over Tateishi et al., the remaining claims that depend therefrom are likewise submitted to be in allowable form.

Applicant submits that additional bases exist for the allowability of the subject matter embodied in the pending dependent claims as detailed in Paper No. 20100602, page 5, first full paragraph – page 7, first full paragraph. Applicant reserves the right to make such remarks of record in due course of prosecution in the event that the rejection of these claims is maintained. Based on Applicant's belief that an independent claim is currently in allowable, rejoinder of withdrawn claims dependent therefrom associated with nonelected species is requested on the basis of the existence of a generic claim.

In light of the above amendments and remarks, reconsideration and withdrawal of the rejection as to claims 1-5, 9-11, 14, 21-27 and 29 under 35 U.S.C. §103(a) over Tateishi et al. is requested.

Remarks Directed to Rejection of Claims 13 and 28 under
35 U.S.C. §103(a) over Tateishi et al. in View of Kashiwatani et al.

The basis of the rejection is that Tateishi et al. lacks a teaching as to a flexible web substrate supported by a conveyor roller. Kashiwatani et al. is cited to bolster this deficiency of Tateishi et al.

Based on claim 13 being dependent from claim 1 and claim 28 being dependent from claim 21 that are now believed to be in allowable form, and the above-detailed deficiencies of Tateishi et al., which Kashiwatani et al. fails to bolster, it is respectfully submitted that claims 13 and 28 are now in allowable form.

Based on the above remarks, reconsideration and withdrawal of the rejection as to claims 13 and 28 under 35 U.S.C. §103(a) over Tateishi et al. in view of Kashiwatani et al. is requested.

Summary

By way of this amendment, claims 1, 5 and 21 have been amended; claims 1-5, 9-11, 13, 14 and 21-29 are currently being examined. Rejoinder of withdrawn claims 6-8 and 12 is also requested. Each of the pending claims is now believed to be in allowable form and directed to patentable subject matter. Reconsideration and withdrawal of the outstanding rejections and the passing of this application to allowance are respectfully requested. In the event that the Examiner has any suggestion as to how to improve the form of any of the pending claims, it is respectfully requested that the undersigned attorney in charge of this application be contacted at the telephone number given below to implement such suggestions.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 07-1180.

Dated: October 20, 2010

Respectfully submitted,

By /Avery N. Goldstein, Ph.D./

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